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detecting the gas phase material from a change in conductivity between the first and second electrodes with the detector; and
generating an alert based on the detection of the gas phase material;
wherein the detection surface is selected such that the gas phase material preferentially deposits on the detection surface.

BB2 16.
B2
A method of detecting a gas phase material comprising:
providing a sensor comprising first and second electrodes, a detection surface extending between the first electrode and the second electrode, and a detector operatively connected to the first and second electrodes, wherein the detection surface is not electrically conductive;
exposing the sensor to a gas phase material comprising ruthenium, wherein an electrically conductive film of the gas phase material forms on the detection surface between the first and second electrodes;
detecting electrical conductivity of the electrically conductive film between the first and second electrodes with the detector; and
generating an alert based on the detection of the electrical conductivity of the electrically conductive film;
wherein the detection surface is selected such that the gas phase material preferentially deposits on the detection surface.

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10. A method of detecting a gas phase material comprising:
providing a sensor comprising first and second electrodes, a detection surface extending between the first electrode and the second electrode, and a detector operatively connected to the first and second electrodes;
heating the detection surface above ambient temperature;
exposing the detection surface to a gas phase material comprising ruthenium, wherein an electrically conductive film comprising ruthenium forms on the detection surface between the first and second electrodes;

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For: DETECTION OF GAS PHASE MATERIALS

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12. A sensor for detecting a gas phase material comprising ruthenium in an environment, the detector comprising:

first and second electrodes;

a detection surface extending between the first electrode and the second electrode, wherein the detection surface comprises a material on which the gas phase material comprising ruthenium preferentially deposits; and

a detector measuring electrical conductivity between the first and second electrodes, where the detector generates an alert when an electrically conductive film comprising ruthenium forms on the detection surface between the first and second electrodes.

17. A sensor for detecting a gas phase material comprising ruthenium in an environment, the detector comprising:

first and second electrodes;

a detection surface extending between the first electrode and the second electrode, wherein the detection surface comprises a material on which the gas phase material comprising ruthenium preferentially deposits;

a heater capable of providing thermal energy to the detection surface; and

a detector measuring electrical conductivity between the first and second electrodes, where the detector generates an alert when an electrically conductive film comprising ruthenium forms on the detection surface between the first and second electrodes.

21. A method according to claim 1, wherein selection of the detection surface comprises selecting a detection surface comprising polypropylene.

22. A method according to claim 1, wherein selection of the detection surface comprises selecting a detection surface having a selected morphology.

23. A method according to claim 22, wherein the selected morphology is smooth.

24. A method according to claim 22, wherein the selected morphology is structured.
25. A method according to claim 6, wherein selection of the detection surface comprises selecting a detection surface having a selected morphology.
26. A method according to claim 25, wherein the selected morphology is smooth.
27. A method according to claim 25, wherein the selected morphology is structured.
28. A method according to claim 10, wherein selection of the detection surface comprises selecting a detection surface comprising polypropylene.
29. A method according to claim 10, wherein selection of the detection surface comprises selecting a detection surface having a selected morphology.
30. A method according to claim 29, wherein the selected morphology is smooth.
31. A method according to claim 29, wherein the selected morphology is structured.
32. A sensor according to claim 12, wherein the detection surface is smooth.
33. A sensor according to claim 12, wherein the detection surface is structured.
34. A sensor according to claim 17, wherein the detection surface is smooth.
35. A sensor according to claim 17, wherein the detection surface is structured.
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